



**TVA Standard  
Programs and  
Processes**

**TITLE**

**Internal Energy Efficiency Process  
(Including Potable Water &  
Sustainability as Related to Energy)**

**TVA-SPP-3.2**

**Rev. 0000**

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Effective Date TBD

Responsible Peer Team: Agency Energy Management Committee

Approved by: \_\_\_\_\_ Date \_\_\_\_\_

Approved by: \_\_\_\_\_ Date \_\_\_\_\_

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**Revision Log**

<b>Revision or Change Number</b>	<b>Effective Date</b>	<b>Affected Page Numbers</b>	<b>Description of Revision/Change</b>
0	TBD	All	Initial issue.

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## **1.0 PURPOSE**

TVA, as an agency of the federal government, is required to implement and comply with the following; National Energy Conservation Policy Act (NECPA), Energy Policy Act of 1992 (EP Act 92), EPCA 05, and 10 C.F.R. Part 434/435. The purpose of this process is to incorporate internal energy-related efficiencies into the operation of TVA. This process is rigorous enough to meet requirements of the above laws while meeting the TVA Energy Policy, TVA Energy Plan, Executive Orders (E.O.) 13123, 13221 and 13149, and amendments to these and prior laws and regulations (See Appendix A- "Energy Laws and Regulations").

## **2.0 SCOPE**

This process incorporates TVA wide internal energy efficiency into the areas of energy management, potable water management, and sustainability.

## **3.0 PROCESS**

### **3.1 Roles and Responsibilities**

#### Senior Energy Official

The Senior Energy Official is a TVA official, at the Assistant Secretary level or above or equivalent to a TVA Executive Vice President, and is responsible for meeting energy goals and requirements for the agency, including preparing the annual report to the President and Congress. This designation shall be reported to the Deputy Director for Management of OMB. The Senior Energy Official or their designee shall participate in the Interagency Energy Policy Committee and other senior official meetings.

#### Chief Energy Manager

The Chief Energy Manager is a TVA manager responsible for assisting the Senior Energy Official in meeting energy goals and requirements for the agency, including preparing the annual report to the President and Congress. The Chief Energy Manager is also responsible for managing all aspects of the Internal Energy Management Program. This manager shall attend and represent TVA in Interagency Energy Management Task Force meetings, working groups and other required and beneficial meetings to achieve TVA goals and objectives.

#### Internal Energy Management Program (IEMP)

This program is managed by the Chief Energy Manager under the Senior Energy Official. The IEMP and its staff provide oversight and guidance on energy management within TVA, including potable water management and sustainability.

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### **3.1 Roles and Responsibilities (continued)**

#### Agency Energy Management Committee (AEMC)

The AEMC is chaired by TVA's Chief Energy Manager and sponsored by TVA's Senior Energy Official. The AEMC is a team consisting of appropriate procurement, legal, budget, management, and technical representatives from each of TVA's Strategic Business Units (SBU) and/or Business Units (BU). The AEMC is responsible for disseminating information related to energy management and associated environmental considerations in facility and general operations inside TVA and approval of SBU and BU energy plans and processes. Plans and processes should be submitted to the AEMC through the organizations representative. Committee members are responsible for informing their organizations of the requirements of governing federal statutes, E.O., federal regulations, TVA energy and related environmental management objectives and assisting TVA in taking appropriate actions (See Appendix B - "AEMC Members by SBU or BU").

#### TVA Strategic Business Units (SBUs)

SBUs support processes for their internal areas of responsibility which impact energy efficiency, water efficiency, and energy-related sustainability to comply with TVA objectives applicable federal laws and regulations (See Appendix C - "Organizational Responsibilities").

#### Office of General Counsel (OGC)

OGC provides legal advice and oversight to AEMC and IEMP on new and existing regulations and laws and is represented on the AEMC.

#### Chief Financial Officer (CFO)

The CFO provides financial advice and oversight to AEMC and IEMP related to new and existing regulations and laws and is represented on the AEMC.

### **3.2 Internal Energy Efficiency**

#### **3.2.1 Facility/Asset Requirements**

All or portions of buildings, grounds, structures, and other assets whether owned or leased by TVA shall meet minimum energy, potable water, and sustainable design standards as defined in the TVA Energy Plan (See Appendix D - "TVA Energy Policy and Plan").

SBUs and BUs should maximize the use of existing/compliant space, assets, and facilities first without disruption/alteration before planning renovations or new construction. Periodic surveys will be conducted to document existing compliance and identify additional energy efficient improvements that are life-cycle cost effective to implement. Basic requirements include:

- A. Energy - facility designs shall meet the requirements of 10 C.F.R. Part 434/435 and the TVA Resource Efficient Building Design Process - TVA-SPP-28.2. Efforts shall be made to implement renewable energy projects and facilitate the siting of renewable generation on TVA property.

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### **3.2.1 Facility/Asset Requirements (continued)**

Business actions shall support agency-wide energy consumption goals. New facilities shall be designed to meet all current energy/water/sustainable goals and objectives.

Leases shall include language to support TVA's energy efficient goals and objectives.

Low energy-consuming vehicles shall be used throughout the agency where applicable (See Appendix E – “Fleet Strategy”).

- B. Sustainable Design - sustainable design principals shall be applied to facility renovations and the sitting, design and construction of new facilities. The TVA Sustainable Checklist and the TVA Sustainable Architecture Design Guidelines (See Appendix F – “TVA Sustainable Checklist” and Appendix G - “TVA Sustainable Architecture Guideline”) shall be applied.

Sustainable building materials are preferred over standard building materials during construction and should be considered first.

- C. Water - all organizations shall manage their facilities and assets to achieve water-efficiency in compliance with the TVA Comprehensive Water Management Plan (See Appendix H -- “TVA Comprehensive Water Management Plan”).

Facilities shall incorporate water conservation Best Management Practices (BMPs) as outlined in TVA’s Comprehensive Water Management Plan.

### **3.2.2 Operational Requirements**

Operations and maintenance activities should be performed as efficiently as possible to minimize the consumption of energy and natural resources and to prevent damage to the environment. SBUs involved in energy related operations and maintenance functions shall utilize the TVA Energy Plan or develop their own energy efficiency management plan to help reduce operational costs.

Energy Management training shall be provided to appropriate personnel. Basic requirements for energy plans include:

- A. Energy - new or replacement systems shall be procured with consideration to energy and sustainable efficiency. Existing systems shall be properly maintained to operate efficiently. Operational activities shall be planned to minimize energy consumption.

Organizations shall provide applicable data and performance measurement results for inclusion into the TVA Annual Report on Energy Management submitted to the Office of Management & Budget (OMB) and Department of Energy (DOE) each fiscal year.

- B. Sustainable Design - efforts shall be made to remanufacture, reuse, or recycle existing materials and equipment to minimize the placement of items into environmentally sensitive waste streams. Sustainable materials shall be specified to meet operational requirements.
- C. Water - water conservation practices shall be applied to all TVA potable water used in operations.

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### **3.2.3 Reporting Requirements**

TVA's Senior Energy Official and the Chief Energy Manager will coordinate all internal energy management reporting required by the Federal Government. TVA SBUs through their AEMC representatives shall provide requested energy management information.

Reporting requirements include an Annual Report on Energy Management, Energy Scorecard and Energy Implementation Plan consisting of information on activities directed toward meeting agency energy goals and objectives. For reporting requirements and schedules see Appendix I – "Energy Management Reporting".

## **4.0 RECORDS**

### **4.1 QA Records**

Contact records officer - None

### **4.2 Non-QA Records**

Records will be submitted to and retained within TVA's Internal Energy Management Program including but not limited to the TVA Energy Policy, TVA Energy Plan, TVA Energy Management Annual Report, TVA Energy Scorecard, TVA Energy Management Implementation Plan, and supporting documentation.

## **5.0 DEFINITIONS**

**10 C.F.R. Part 434/435** - Section 10, of the Code of Federal Regulations outlines the energy efficiency requirements for new federal buildings.

**Energy** - the electricity, natural gas, fuel oil, etc., typically expressed in BTUs, used to power and operate TVA's facilities and operations.

**NECPA** - the National Energy Conservation Policy Act, enacted in 1978, impacts most producers and users of energy in the United States, its goal includes the reduction of both energy consumption and costs in the private and government sectors.

**EPAct 92** - the Federal Energy Policy Act, enacted in 1992, amended portions of NECPA and included additional energy requirements and goals. The Act included the establishment of specific energy reduction goals for federal agencies.

**EPAct 05** - the Federal Energy Policy Act, enacted in 2005, amends portions of EPAct92 and NECPA and includes additional energy requirements and goals.

**Executive Order 13123** - directs federal agencies to improve energy management in order to save taxpayer dollars and reduce emissions that contribute to air pollution and global climate change.

**Executive Order 13149** - directs federal agencies to improve energy efficiency in its vehicle fleet and transportation operations. This E.O. also requires the purchase of alternative fueled vehicles and requires agencies to draft fleet strategies and set energy efficiency goals.

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## 5.0 DEFINITIONS (continued)

**Executive Order 13221** - directs federal agencies to purchase energy standby power devices that consume 1 watt/hr or less to reduce consumption when equipment is not in use or in standby mode.

**Facility/Assets** - any owned or leased property that has value. A facility or asset can range from a desk to a building, and includes land and vehicles.

**Gray Water** - water which has been mildly contaminated with soap and soil. Typically water discharged from sinks, showers, bathtubs, and washing machines.

**Life Cycle Cost-Effective** - the sum of the present values of investment, capital, installation, energy, operating, maintenance, disposal cost, and other costs for energy and water using products that are less than those for alternative energy/water using products or services.

**Operations** - any activity that uses material resources or energy.

**Potable Water** - fresh, clean water, which is safe for human consumption.

**Renewable Energy** - pursuant to E.O. 13123, energy produced by solar, wind, geothermal, and biomass power.

**Sustainability** - to meet the needs of the present without compromising the ability of future generations to meet their own needs.

**Sustainable Design** - the design and construction of buildings in such a way as to minimize the negative impact on the environment.

**Sustainable Building Materials** - those materials whose creation, use and disposal does not damage the environment. A good sustainable building material is one that is manufactured locally with non-toxic recycled content using minimal amounts of natural resources that can be recycled or reused at the end of its life.

**Water Conservation Best Management Practices (BMPs)** - a variety of conservation technologies and techniques used to save water and associated energy costs.